



Process Standards for Mathematics

Indiana's Academic
Standards

Grade 5: Finding Area and
Perimeter

1. Become familiar with the Process Standards for Mathematics.
2. Work the task.
3. View the video.
4. Debrief the video.

Become familiar with the Process Standards.

- Read the brief descriptions of the 8 Process Standards for Mathematics.
- Underline key words for each Process Standard.
- In small groups, share your thoughts or questions about each standard. Be prepared to share your understanding of the standards with the rest of the participants.

Work the task

Rafael is covering four countertops with tiles. The tiles are three inches by six inches.

For each countertop:

- Decide whether Rafael will be able to cover the entire surface with whole tiles (no gaps and no overlaps).
- Record your work with labeled pictures, and explain in words why the countertop can or cannot be covered with tiles.
- Determine the area and perimeter of each countertop.

Countertop A: 15 inches by 18 inches

Countertop B: 9 inches by 9 inches

Countertop C: 12 inches by 15 inches

Countertop D: 24 inches by 27 inches

IAS-M Connection

4.M.4

Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems involving shapes.

Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into no-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems involving shapes.

Expectations for Viewing the Video

- Assume there are many things you do not know about the classroom and the students.
- Assume good intent and expertise on part of the teacher.
- Keep focused on how the students are engaging in the task.

View the Video



During the video, when you see the light bulb appear, it is an indication you should pay special attention to the students' and teacher's actions.

Record what you see happening on the Video Analysis Matrix.

Debrief the Video

- For each row on your Video Analysis Recording Sheet, discuss what you noticed while you watched the video in your small group.
- Then determine which Process Standard you believe was best exhibited in the classroom during this time period.

Additional Questions

1. How would you describe the overall structure of Mr. Yates' lesson plan?
2. **In PS.7, students are expected to “make use of structure.” What were the different forms of structure evident in this lesson?**
3. How did the teacher facilitate (prompt) the PS in this video?

Student Work Samples

- For each student's work, discuss the following:
 - Identify whether there are signs that this student is engaging in one of the 8 Process Standards.
 - If you were working with this student, what question could you ask to deepen his/her engagement in the mathematical practices.